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Fig. 1a)

ccggcggcag	gagccgccac	catggagttc	cgccaggagg	agtttcggaa	gctagcgggt	60
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acatccactc	taaacatgct	gatccctca	gctgcccgcg	tccactatgg	ctgtgtcatc	540
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catctcccct	accagcagat	tctgcgaaag	caccaaattt	ctcaagaccc	tcttctccct	2340
agcttagcat	aatgtctggg	gaaaca				

Fig. 1b)

1	MEFRQEEPRK	LAGRALGKLH	RLLEKRQEGA	ETLELSADGR	PVTTQTRDPP
51	VVDCTCFGLP	RRYIIAIMSG	LGFCISFGIR	CNLGVAIVSM	VNNSTTHRGG
101	HVVVQKAQFS	WDPETVGLIH	GSFFWGYIVT	QIPGGFICQK	FAANRVFGFA
151	IVATSTLNML	IPSAARVHYG	CVIFVRILQG	LVEGVVTPAC	HGIWSKWAPP
201	LERSRLATTA	FCGSYAGAVV	AMPLAGVLVQ	YSGWSSVFYV	YGSFGIFWYL
251	FWLLVSYESP	ALHPSISEEE	RKYIEDAIGE	SAKLMNPLTK	FSTPWRRFPT
301	SMPVYAIIVA	NFCRSWTFYL	LLISQPAYFE	EVFGFEISKV	GLVSALPHLV
351	MTIIVPIGGQ	IADFLRSRRI	MSTTNVRKLM	NCGGFGMEAT	LLLTVGYSHS
401	KGVAISFLVL	AVGFSGFAIS	GFNVNHLDA	PRYASILMGI	SNGVGTLSGM
451	VCPIIVGAMT	KHKTREEWQY	VFLIASLVHY	GGVIFYGVFA	SGEKQPWAEP
501	EEMSEKCGF	VGHDQLAGSD	DSEMEDEAEP	PGAPPAPPPS	YGATHSTFQP
551	PRPPPPVRDY				

Fig. 1c)

cgataagctt	gatatacgaat	tccggactct	tgtctggggc	ccttaaccgc	gcgttcgggt	60
catcccgag	cgccagttct	gcttaccaaa	agtggccac	taggcactcg	cattccacgc	120
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tcgtttcggc	ccaagacct	ctaatacttc	gctttaccgg	ataaaactgc	gtggcggggg	240
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ggggggaccc	gcggggtgac	cgccggcagg	agccgccacc	atggagttcc	gccaggagga	480
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gacgacagcc	ttttgtgggt	cctatgctgg	ggcgggtggt	gcgatgcccc	tcgccccggg	1140
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ccgccgcata	atgtccacca	ccaacgtgcg	caagttgatg	aactgcggag	gcttcggcat	1620
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caaatactct	ccaactctgt	tctgcatctt	ccagattggg	ttaaccaatt	actcgtcccc	2640
gccattccag	ggattgattc	tcaccagcgt	ttctgatgga	aaatggcggg	aattcctgca	2700
gcccggggga	tccact					2716

Fig. 1d)

1	MEFRQEEFRK	LAGRALGKLH	RLLEKRQEGA	ETLELSADGR	PVTTQTRDPP
51	VVDCTCFGLP	RRYIIAIMSG	LGFCISFGIR	CNLGVAIVSM	VNNSTTHRGG
101	HVVVQKAQFS	WDPETVGLIH	GSFFWGYIVT	QIPGGFICQK	FAANRVFGFA
151	IVATSTLNML	IPSAARVHYG	CVIFVRILQG	LVEGVITYPAC	HGIWSKWAPP
201	LERSRLATTA	FCGSYAGAVV	AMPLAGVLVQ	YSGWSSVFYV	YGSFGIFWYL
251	FWLLVSYESP	ALHPSISEEE	RKYIEDAIGE	SAKLMNPLTK	FSTPWRRFFT
301	SMPVYAIIVA	NFCRSWTFYL	LLISQPDYFE	BVFGFEISKV	GLVSALPHLV
351	MTIIVPIGGQ	IADFLRSRRI	MSTTNVRKLM	NCGGFGMEAT	LLLTVGYSHS
401	KGVAISFLVL	AVGFSGFAIS	GFNVNHLDIA	PRYASILMGI	SNGVGTLSGM
451	VCPIIVGAMT	KHKTREEWQY	VFLIASLVHY	GGVIFYGVFA	SGEKQPWAEP
501	EEMSEEKCGF	VGHDQLAGSD	DSEMEDEAEP	PGAPPAPPPS	YGATHSTFQP
551	PRPPPPVRDY				

Fig. 1e)

gaattcggca	cgagcggagc	tgcgggggccc	ggccggggccc	gggcgggaccc	cgggatccc	60
gacgcggccg	cccggggccc	cgggcggggg	gattggcagg	ggacccgcgt	gggcacagcc	120
accatggagt	tccggcagga	ggagtttcgg	aagctggcgg	ggcgcgccct	ggggaggctg	180
caccggttac	tggagaagcg	gcaggaaggg	gcggagacat	tggagctgag	cgccgacggg	240
cgcccagtga	ccacacacac	gcgggacccg	ccggtggtgg	actgcacttg	ctttggcctc	300
cctcgccgct	acatcatcgc	gatcatgagc	ggctctgggtt	tctgcatcag	ctttggcatc	360
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catggctcct	ttttctgggg	gtacattgtc	actcagattc	ctggaggatt	tatctgccaa	540
aaattcgcag	ccaacagggg	ctttggcttt	gccattgtgg	ctacctccac	cctaaatatg	600
ttgatccctt	cagcagcccc	tgttcactat	ggctgtgtca	tcttcgtgag	gatccttcag	660
ggattggtgg	aggggggtcac	ataccctgct	tgccatggca	tctggagcaa	atgggcccc	720
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cctgcactac	accccagcat	ctccgaggag	gagcgcaaat	acattgagga	tgccatcgga	960
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gggggtgaagc	tgcacactag	cagtttcaag	ctcgtgccga	attc		

Fig. 1f)

```
1   MEFRQEEFRK LAGRALGRLH RLLEKRQEGA ETLLELSADGR PVTTHTRDPP VVDCTCFGLP
51  RRYIIAIMSG LGFCISFGIR CNLGVAIVSM VNNSTTHRGG HVVVQKAQFN WDPETVGLIH
101 GSFFWGYIVT QIPGGFICQK FAANRVFGFA IVATSTLNML IPSAARVHYG CVIFVRILQG
151 LVEGVITYPAC HGIWSKWAPP LERSRLATTA FCGSYAGAVV AMPLAGVLVQ YSGWSSVFYV
201 YGSFGIFWYL FWLLVSYESP ALHPSISEEE RKYIEDAIGE SAKLMNPVTK FNTPWRRFFT
251 SMPVYAIIVA NFCRSWTFYL LLISQPAYFE EVFGFEISKV GLVSALPHLV MTIIVPIGGQ
301 IADFLRSRHI MSTTNVRKLM NCGGFGMEAT LLLVVGYSHS KGVAISFLVL AVGFSGFAIS
351 GFNVNHL DIA PRYASILMGI SNGVGTLSGM VCPPIVGAMT KHKTREEWQY VFLIASLVHY
401 GGVIFYGVFA SGEKQPWAEF EEMSEKCGF VGHDQLAGSD ESEMEDEVEP PGAPPAPPPS
451 YGATHSTVQP PRPPPPVRDY
```

Fig. 1g)

```

1      cggcgcgccc ggccccgcggg cgggggggatt ggcagggggac ccgcgtgggc acagccacca
61     tggagttccg gcaggaggag ttccggaagc tggcggggcg cgccctgggg aggctgcacc
121    gggttactga gaagcgcgag gaaggcgcgg agacactgga gctgagtgcc gacgggcggc
181    cagtgaccac gcacactcgg gaccgcctg tgggtggactg cacctgcttt ggctccctc
241    gtgcgtacat catcgccatc atgagcggtc tgggtttctg tatcagcttt ggcatccgct
301    gcaacctggg cgtggccatc gtgtccatgg tcaacaacag cacaacccac cgtggggggc
361    acgtgggtgg gcagaaagcc cagttcaact gggatccaga gactgtcgcc ctcatacatg
421    gctccctttt ctgggggtac attgtcactc agattcctgg aggatttatc tgccaaaaat
481    tcgcagccaa cagggtcttt ggctttgcca ttgtgggtac ctccacccta aacatgttga
541    tcccttcagc agcccgcgtt cactatggct gtgtcatctt cgtgaggatc cttcagggat
601    tgggtggagg gggtcacatac cctgcttgcc atggcatctg gagcaaatgg gccctccct
661    tagaacggag tcggctggca acgacagcct tttgcgggtc ctatgctggg gcggtgggtg
721    ccatgccctt ggctggggtc cttgtgcagt attcaggatg gagttctgtc ttctatgtct
781    atggcagctt cgggactctt tggtaacctg tctgggtgct tgtctcctat gagtcccg
841    cactgcaccc cagcatctct gaggaggagc gcaaatacat tgaggatgcc ctcggggaga
901    gcgccaagct catgaaccct gttacgaagt ttaacacacc ctggaggcgc ttcttacgt
961    ccatgccctg ctatgccatc atcgttgcca acttttgccg cagctggacc ttctacctgc
1021   tcctcatctc tcagcccggc tactttgaag aagtgttcgg ctttgagatc agcaagggtg
1081   ggcgtgctgc cactgtgca cactgtgca tgaccatcat cgtaccatt ggaggccaga
1141   tcgctgactt tttgcgcagt cgtcacataa tgtccactac caacgtcgca aagctcatga
1201   actgcggggg tttcgggatg gaagccacgc tgctgctggg ggtcggatac tcgcactcca
1261   agggcggtggc catctccttc ctggctcctg ctgtgggctt cagtggcttt gccatctctg
1321   ggtttaacgt gaaccacttg gacatcgccc ctgcctatgc cagcatcttg atgggcattt
1381   ccaatggcgt gggcacactg tctgggatgg tgtgccccat catcgtgggt gcaatgacca
1441   agcacaagac gcgggaggag tggcagtagc tgttccctcat agcctccctg gtgcactacg
1501   gcggtgtcat cttctatggg gtctttgctt cgggagagaa gcagccgtgg gcagagccgg
1561   aggagatgag cgaggagaag tgtggtttg ttggccacga ccagctgggt ggagtgacg
1621   aaagtgaat ggaggacgag gctgagcccc caggggcgcc ccccgcgccg cctccgtcct
1681   acggggccac acacagcaca gtgcagctc cgaggccccc gccccctgtc cgggactact
1741   gaccacgggc ctcccactgt ggggcagttt ccaggacttc cactccatac acctctagcc
1801   tgagcggcag tgtcgaggaa cccactcct cccctgcctc aggtttaaga tgcaagtctt
1861   ccttggttcc cagtgtctgc cgaccagccc tcttccctc tcaactgctt cctcgggggg
1921   gtgaagctgc acactagcag tttcaaggat acccagactc ccctgaaagt cgttctccgc
1981   ttgtttctgc ctgtgtgggc tcaaatctcc cctttgaggg ctttatttgg agggacagtt
2041   caacctcttc ctctcttggt gttttgaggt ttcacccctt cccccaagac ccagggattt
2101   ctcagctac cccgagatta ttcaggtggg cccctactca gaagacttca tggctcctc
2161   ctattagttt caaggctcgc ctaaccaatt ctacattttt ccaagctggg ttaacctaac
2221   caccaatgcc gccgttccca ggactgatcc tcaccagcgt ttctgaggga aaatggcggt
2281   ttcaagtcct cccaccccc ttttcttccc tcgtccctc accagcacac tttgcggggc
2341   cttgacctta gcttagtaca atcattgtcc agggaaatgg ccaaaatggc tctgctcacc
2401   ccgtgctctt tttctgactc agttttcagg tctcagtagt ggctgccccaa agctattaat
2461   tcagcggctc gaggccacct cttcctcccc gtggtgggtt caggatcccc ctcgcccccc
2521   cccccccaaa tccttgctact ttattctcct ggggtgggtc aggcgcctt cggtttctca
2581   gtggccattt gttgtgtgtc cctcaggggc taaatgattc caaatctggg gtgcttcccc
2641   tcatagacac ccctctctca acgtagaaat ctgggtgggg gtgaggtgtg ttgagagaagt
2701   tacagaatcc caggaaaggg agcggggctg ggaggagagg gttgttctct gggcagggct
2761   gtgtcttggt gtctgtctct gtgacgtaaa tcttgccctg cccaccccca ctcccaataa
2821   acgtctggtg gtacgg

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Fig. 1h)

```

1      MEFRQEEFRK LAGRALGRLH RLLEKQREGA ETELELSADGR PVTTHTRDPP VVDCTCFGLP
61     RRYIIAIMSG LGFCISFGIR CNLGVAVISM VNNSTHTRGG HVVVQKAQFN WDPETVGLIH
121    GSFFWGYIVT QIPGGFICQK FAANRVFGFA IVATSTLNML IPSAARVHYG CVIFVRILOQ
181    LVEGVYTPAC HGIWSKWAPP LERSRLATTA FCGSYAGAVV AMPLAGVLVQ YSGWSSVFYV
241    YGSFGIFWYL FWLLVSYESP ALHPSISEEE RKYIEDAIGE SAKLMNPVTK FNTPWRRFFT
301    SMPVYAIIVA NFCRSWTFYL LLISQPAYFE EVFGFEISKV GLVSALPHLV MTIIVPIGGQ
361    IADFLRSRHI MSTTNVRKLM NCGGFGMEAT LLLVVGYSHS KGV AISFLVL AVGFSGFAIS
421    GFNVNHL DIA PRYASILMGI SNGVGTLSGM VCPIIVGAMT KHKTREEWQY VFLIASLVHY
481    GGVIFYGVFA SGEKQPWAEF EEMSEKCGF VGHDQLAGSD ESEMEDEAEF PGAPPAPPPS
541    YGATHSTVQP PRPPPPVRDY

```


Fig. 2a)

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```

Fig. 2 b)

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1    MESVKQRILA PGKEGLKNFA GKSLGQIYRV LEKKQDTGET IELTEDGKPL EVPERKAPLC
61   DCTCFGLPRR YIIAIMSGLG FCISFGIRCN LGVAIVDMVN NSTIHRGGKV IKEKAKPNWD
121  PETVGMIHGS FFWGYIITQI PGGYIASRLA ANRVFGAAIL LTSTLNMLIP SAARVHYGCV
181  IFVRILQGLV EGVYTPACHG IWSKWAPPLE RSRLATTSFC GSYAGAVIAM PLAGILVQYT
241  GWSSVFYVYG SFGMVWYMFV LLVSYESPAK HPTITDEERR YIEESIGESA NLLGAMEKFK
301  TPWRKFFTSM PVYAIIVANF CRSWTFYLLL ISQPAYFEEV FGFEISKVGM LSAVPHLVM
361  IIVPIGGQIA DFLRSKQILS TTTVRKIMNC GGFGMEATLL LVVGYSHTRG VAISFLVLAV
421  GFSGFAISGF NVNHLDIAPR YASILMGISN GVGTLGSMVC PIIVGAMTKN KSREEWQYVF
481  LIAALVHYGG VIFYAIFASG EKQPWADPEE TSEBKCGFIH EDELDEETGD ITQNYINYGT
541  TKSYGATTQA NGGWPSGWKE KEEFVQGEVQ DSHSYKDRVD YS

```

Fig. 2c)

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gttctatttta aaaaaaaaaa aa

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Fig. 2d)

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1   MESVKQRILA PGKEGIKNFA GKSLGQIYRV LEKKQDNRET IELTEDGKPL
51  EVPEKKAPLC DCTCFGLPRR YIIAIMSGLG FCISFGIRCN LGVAIVDMVN
101 NSTIHRGGKV IKEKAKFNWD PETVGMHGS FFWGYIITQI PGGYIASRLA
151 ANRVFGAAIL LTSTLNMLIP SAARVHYGCV IFVRILQGLV EGVTPACHG
201 IWSKWAPPLE RSRLATTSFC GSYAGAVIAM PLAGILVQYT GWSSVFYVYG
251 SFGMVWYMFV LLVSYESPAK HPTITDEERR YIEESIGESA NLIGAMEKFK
301 TPWRKFFTSM PVYAIIVANF CRSWTFYLLL ISQPAYFEEV FGFEISKVGM
351 LSAVPHLVMT IIVPIGGQIA DFLRSKQILS TTTVRKIMNC GGFGMEATLL
401 LVVGYSHTRG VAISFLVLAV GFSGFAISGF NVNHLDIAPR YASIIMGISN
451 GVGTLSGMVC PIIVGAMTKN KSREEWQYVF LIAALVHYGG VIFYALFASG
501 EKQPWADPEE TSEBKCGFIH EDELDEETGD ITQNYINYGT TKSYGATSQE
551 NGGWPNWGEK KEEFVQESAQ DAYSYKDRDD YS

```

Fig. 2e)

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1      ggcacgagggc tcagtccttaa ttccactctg ccactctgccc gcagagcaca attacgcggg
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901    gctgtaacct gggcgtggcc atcgtggaca tgggtcaaaa cagcactatc caccgcggag
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2101   atggtggagt catattttat gcactatttg cctcaggaga gaaacaacct tgggcagacc
2161   ctgaggaaac aagcgaagaa aaatgtggct tcattcacga agatgaactg gatgaagaaa
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2461   aatgtggtgt gaacatgtaa acatatcaac caagcaagtc ttgctgttca aaaaaaaaaa
2521   aaaaaaaaaa

```

Fig. 2f)

```

1      MESVKQRILA PGKEGKFNFA GKSLSQIYRV LEKKQDNRET IELTEDGKPL EVPEKKAPLC
61     DCTCFGLPRR YIIAIMSGLG FCISFGIRCN LGVAIVDMVN NSTIHRGKV IKEKAKFNWD
121    PETVGMHGS FFWGYIITQI PGGYIASRLA ANRVFGAAIL LTSTLNMLIP SAARVHYGCV
181    IFVRILQGLV EGVTPACHG IWSKWAPPLE RSRLATTSFC GSYAGAVIAM FLAGILVQYT
241    GWSSVIFYVY SFGMVWYMFV LLVSYESPAC HPTITDEERR YIEESIGESA NLLGAMEKFK
301    TPWRKFFTSM PVYAIIVANF CRSWTFYLLL ISQPAYFEEV FGFEISKVGM LSAVPHLVMT
361    IIVPIGGQIA DFLRSKQILS TTVRKIMNC GFGMEATLL LVVGYSHTRG VAISFLVLAV
421    GFSGFAISGF NVNHLDIAPR YASILMGISN GVGTLGSMVC PIIVGAMTKN KSRBEWQYVF
481    LIAALVHYGG VIFYALFASG EKQPWADPEE TSEKCGFIH EDELDEETGD ITQNYINYGT
541    TKSYGATSQE NGGWPNWEK KEFVQEGAQ DAYTYKDRDD YS

```

Figure 3

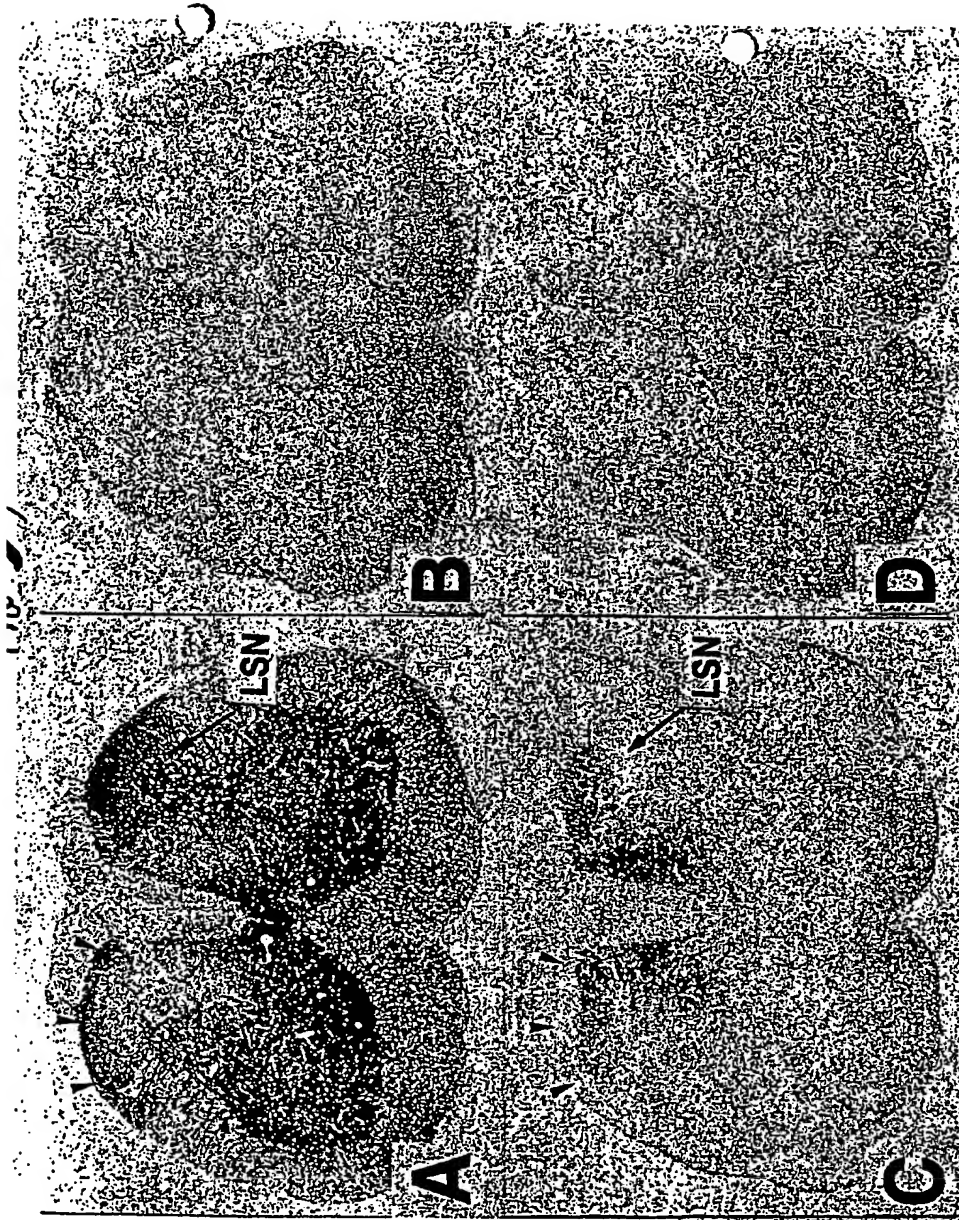


Figure 4

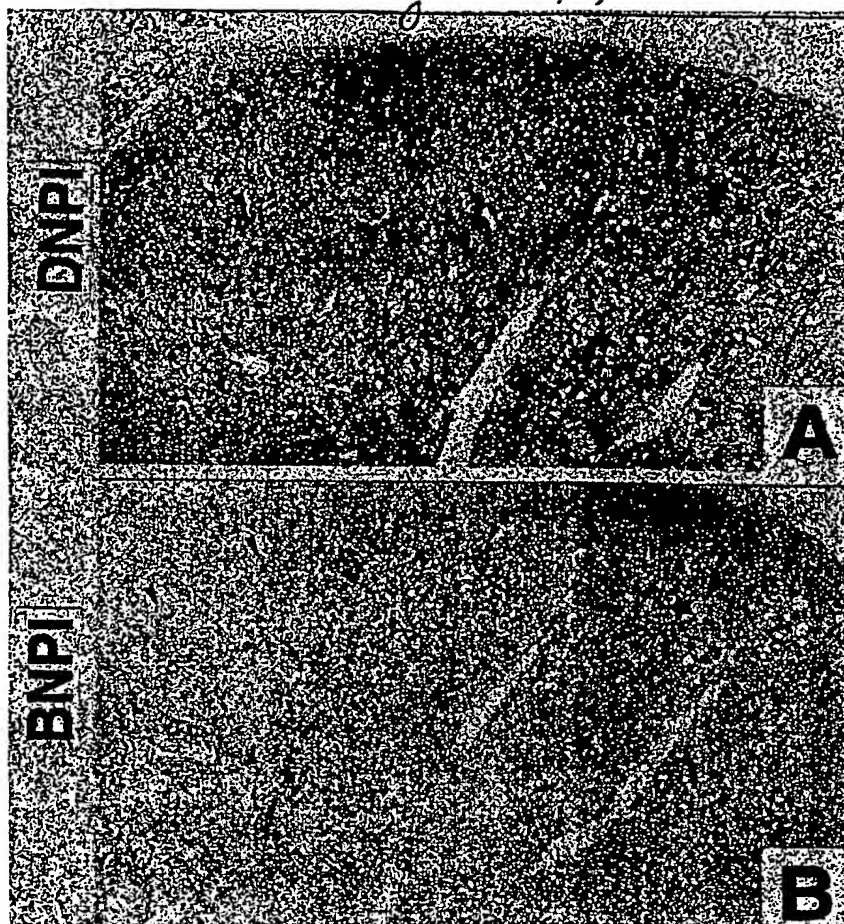


Figure 5

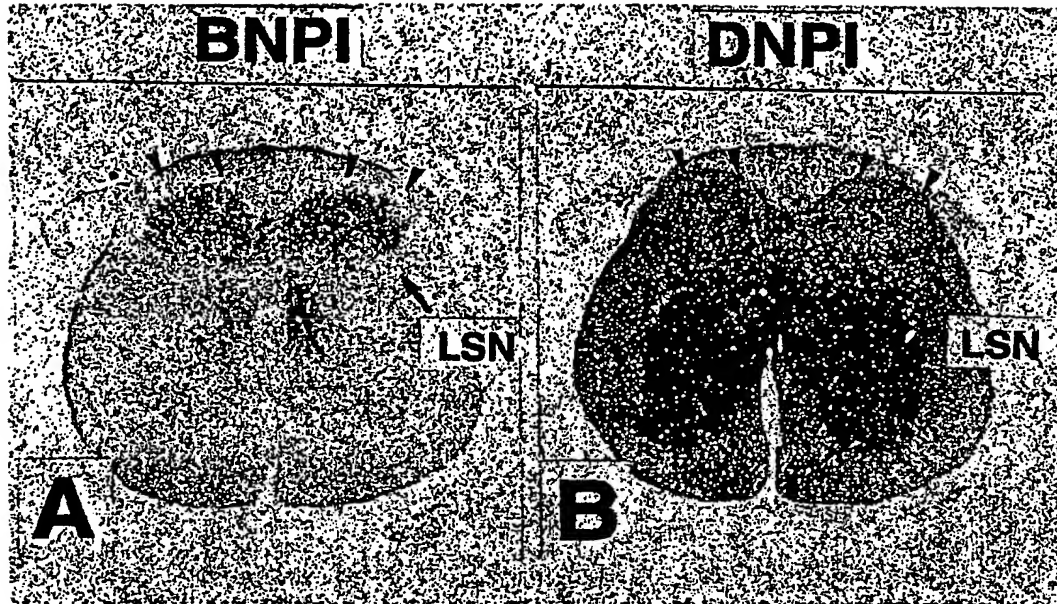


Figure 6

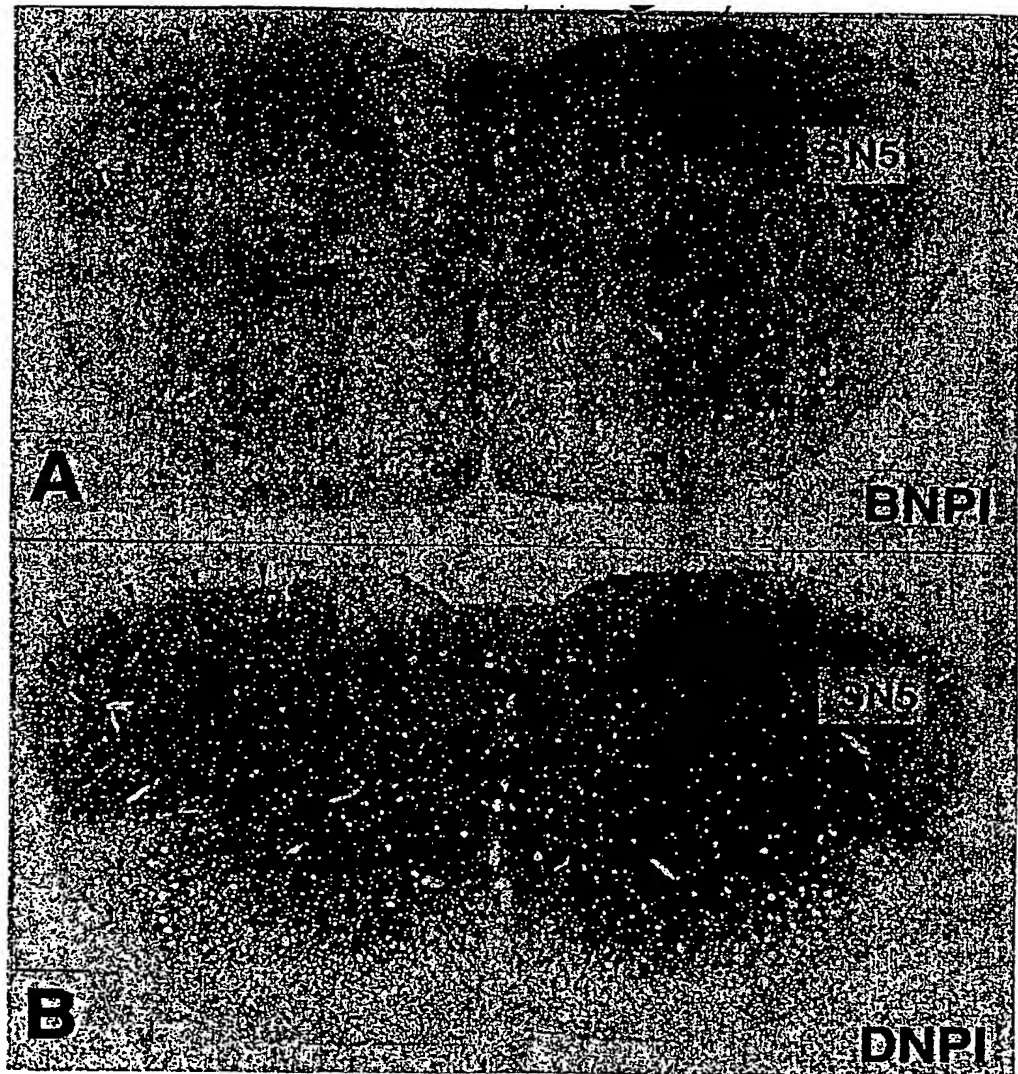


Figure 7

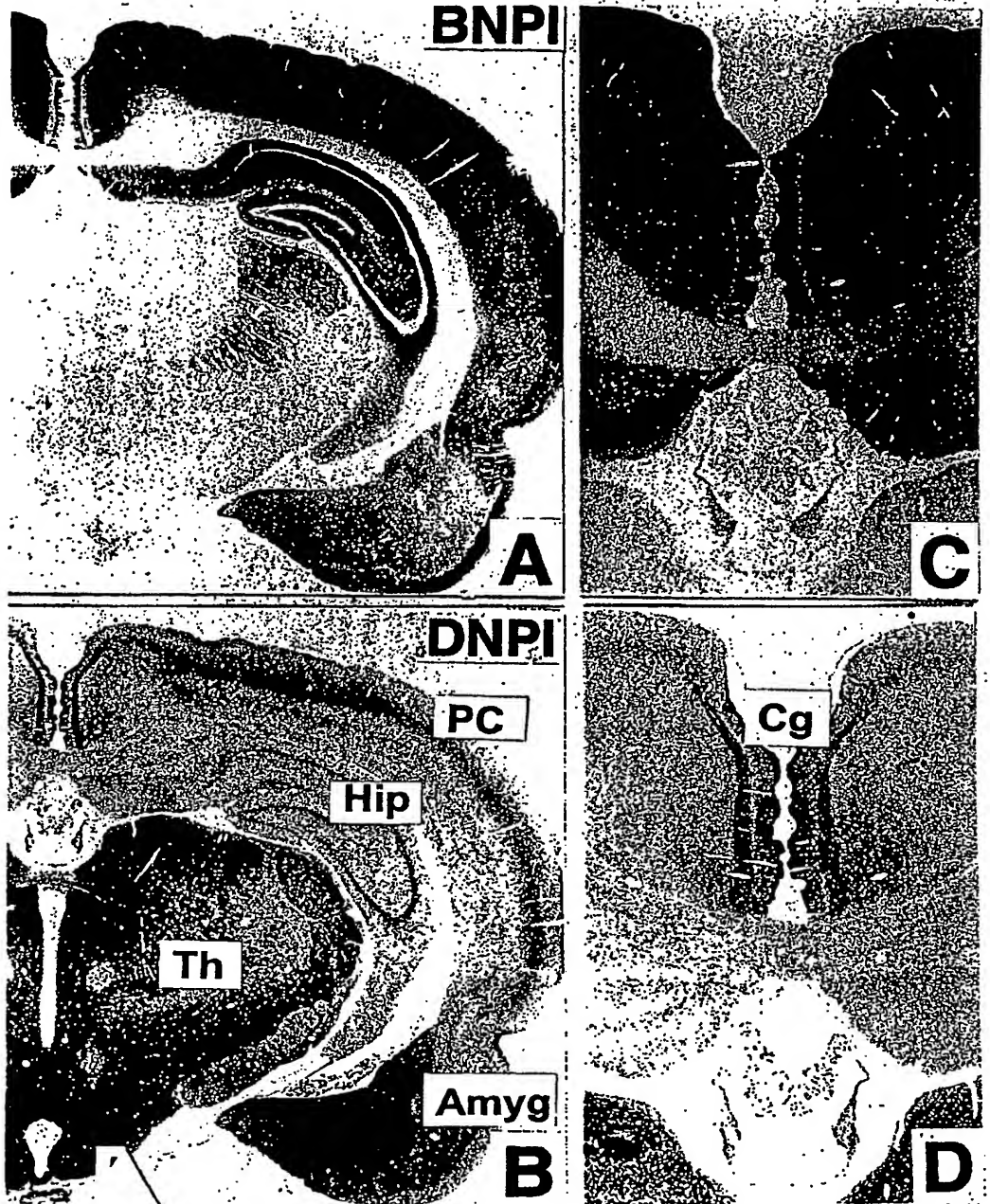


Figure 8

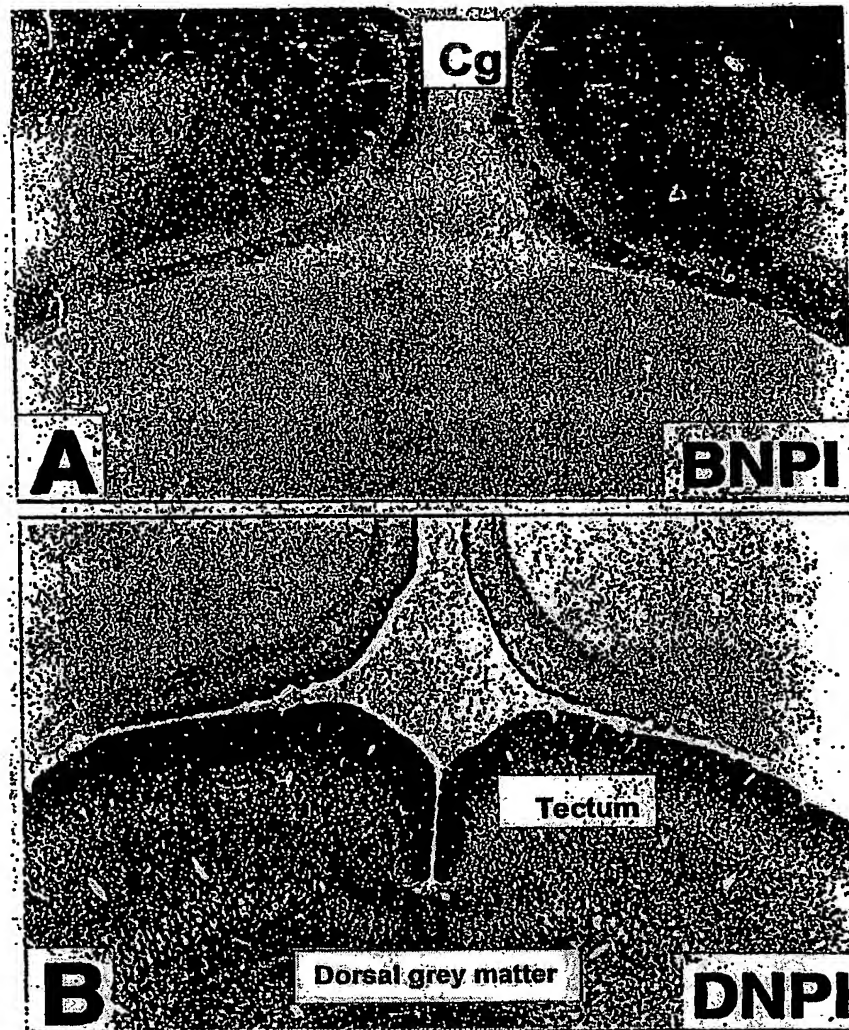


Figure 9

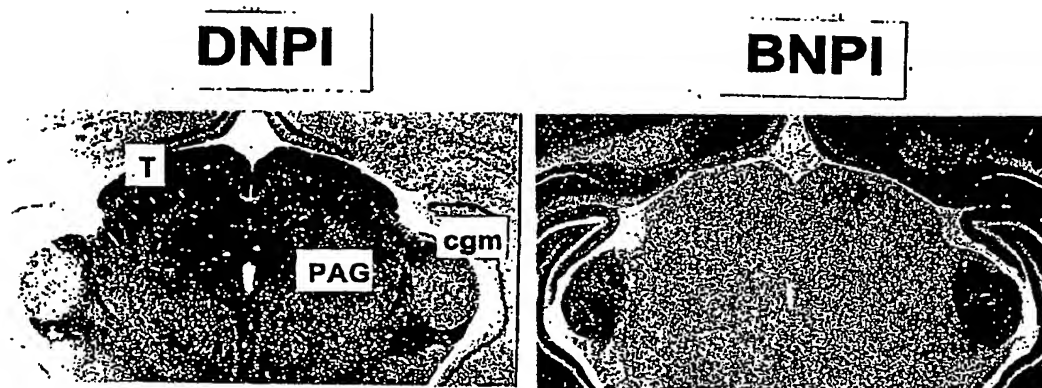
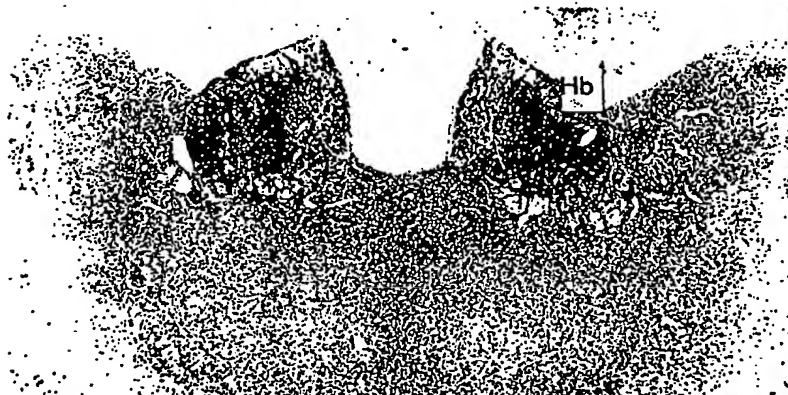
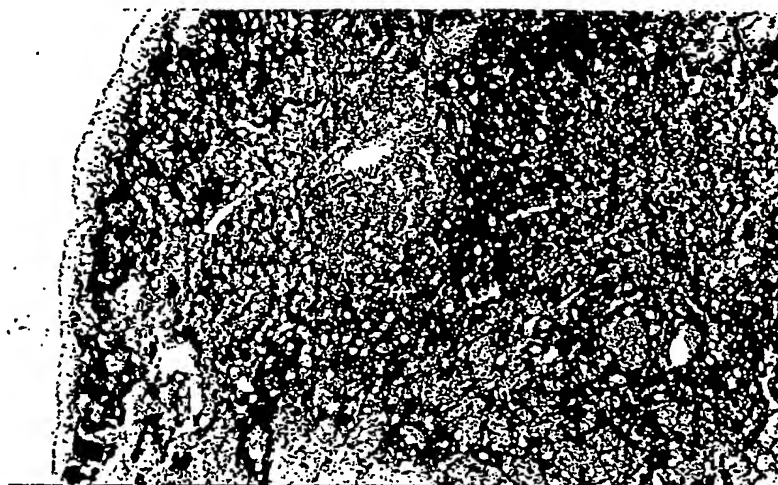


Figure 10

DNPI



DNPI



BNPI

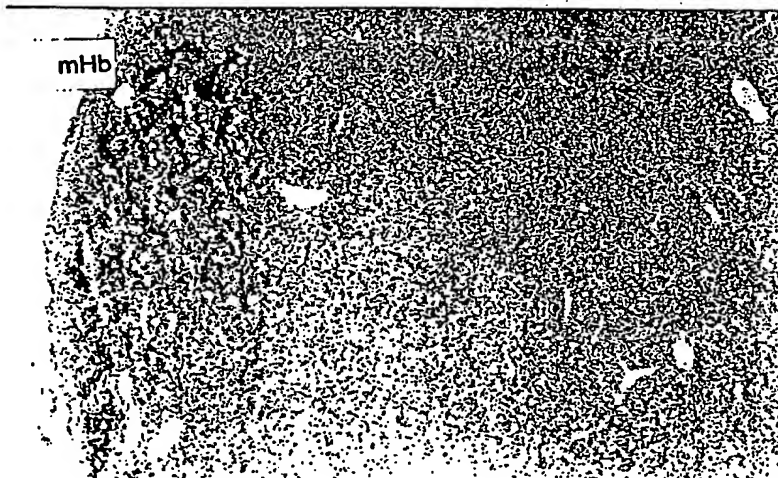


Figure 11

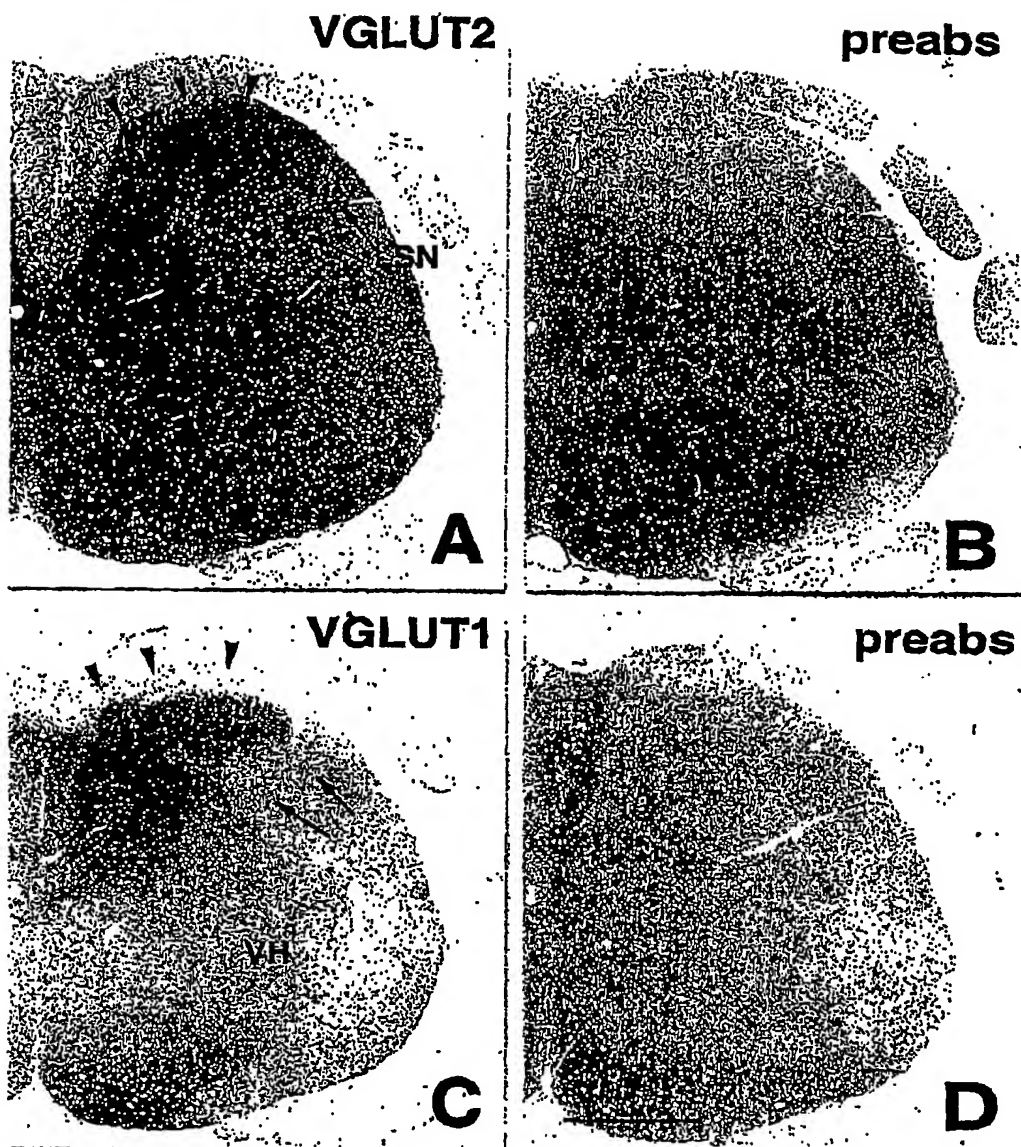


Figure 12

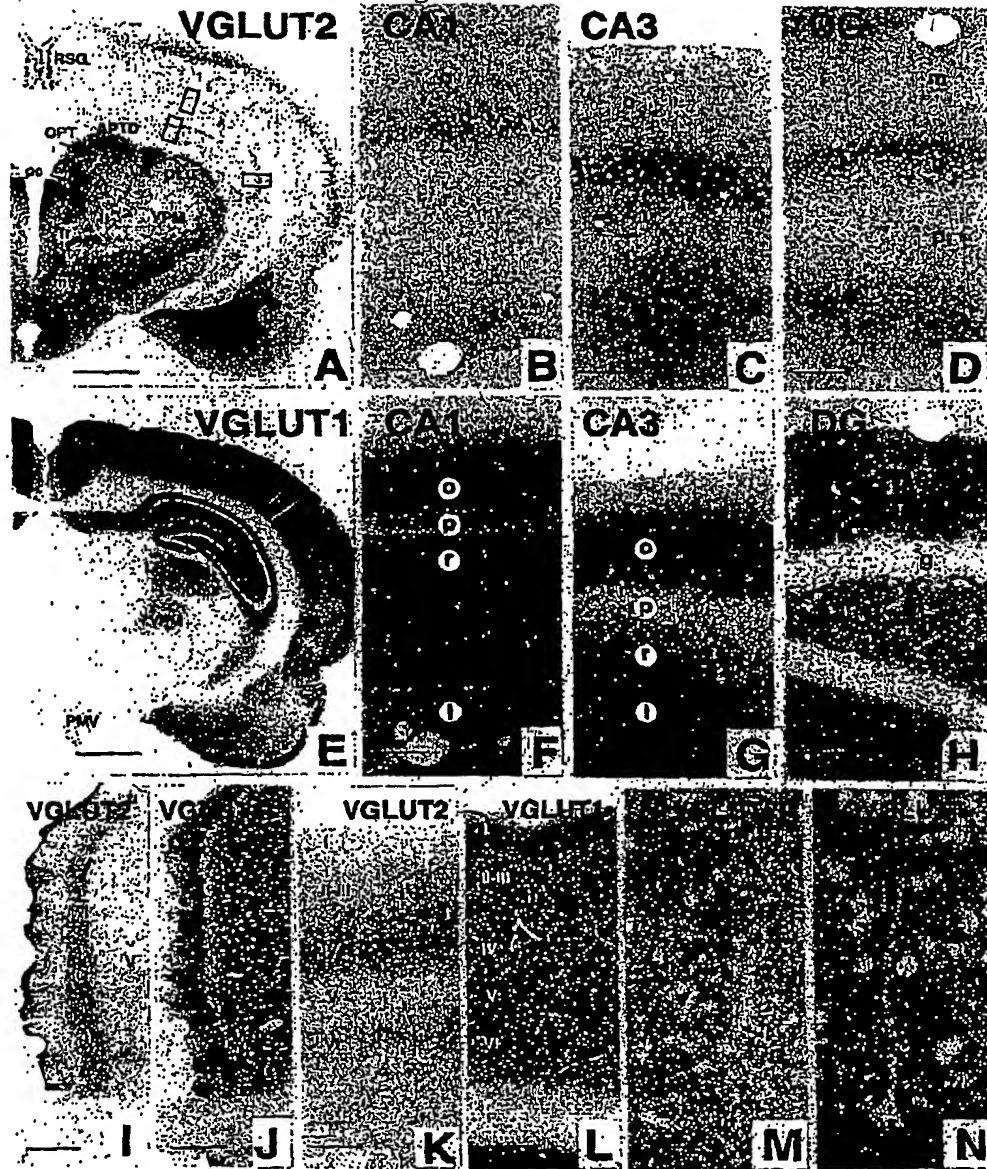


Figure 13

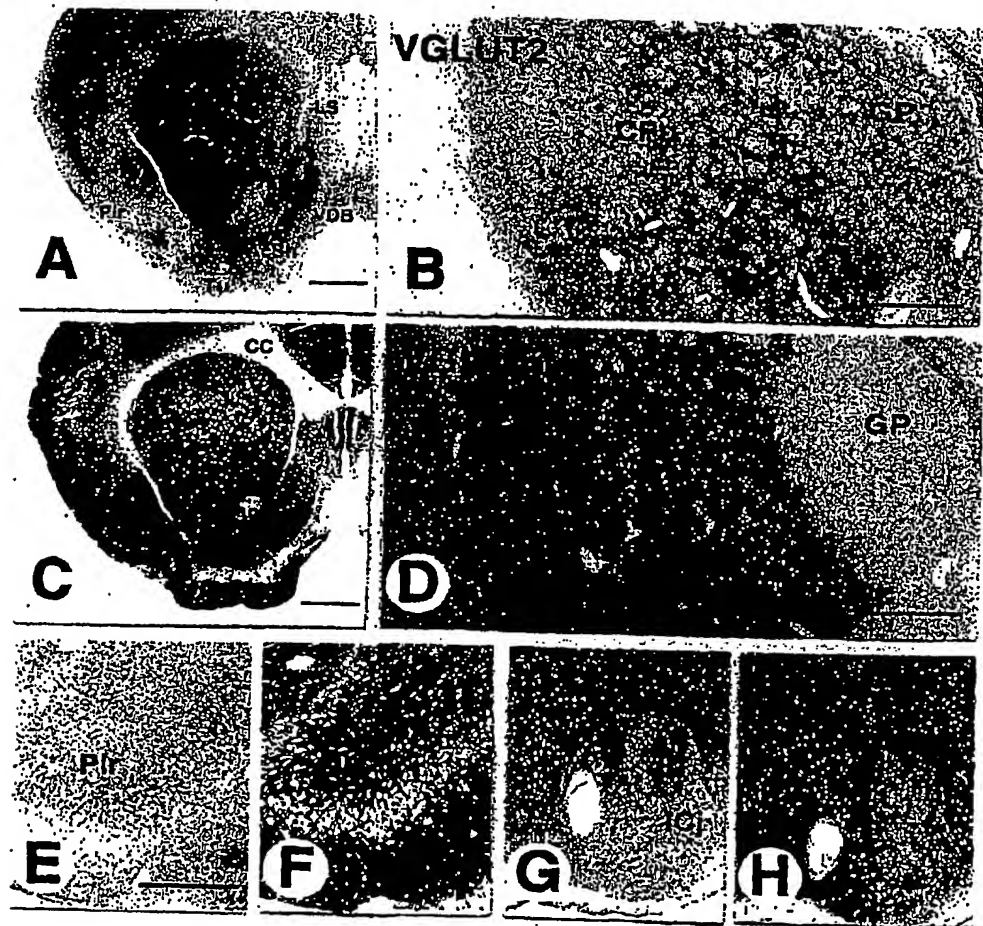


Figure 14

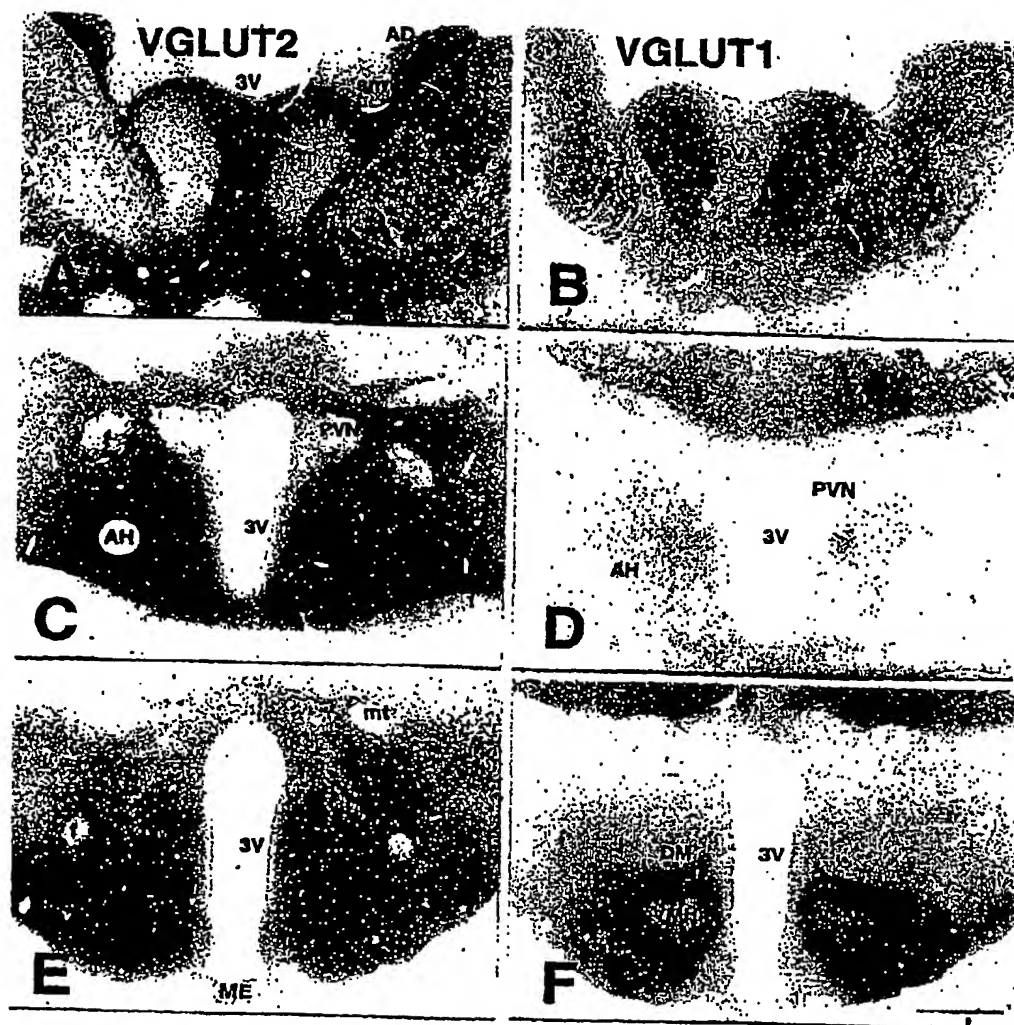


Figure 15

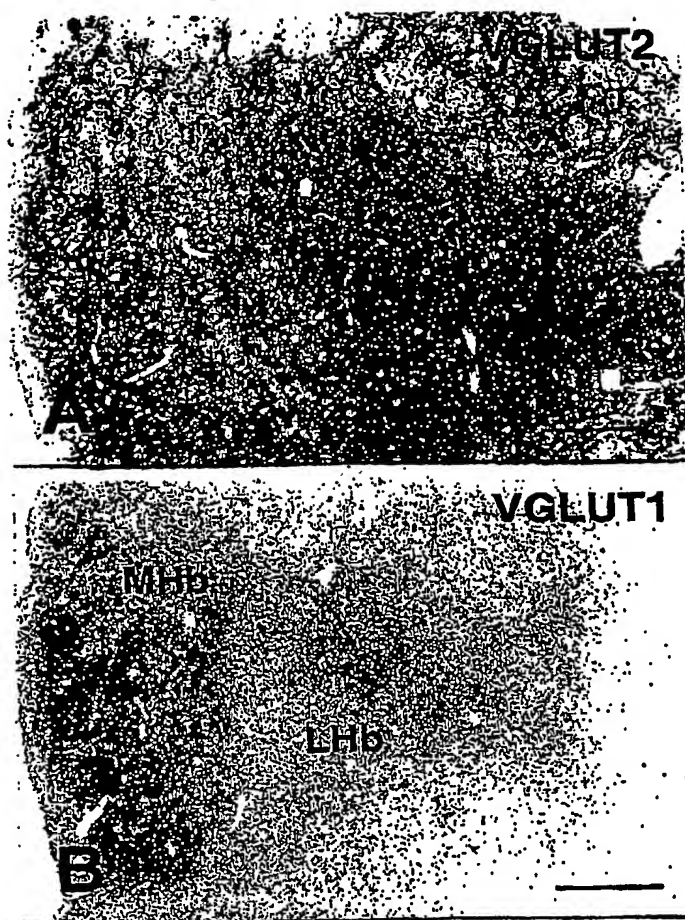


Figure 16



Figure 17

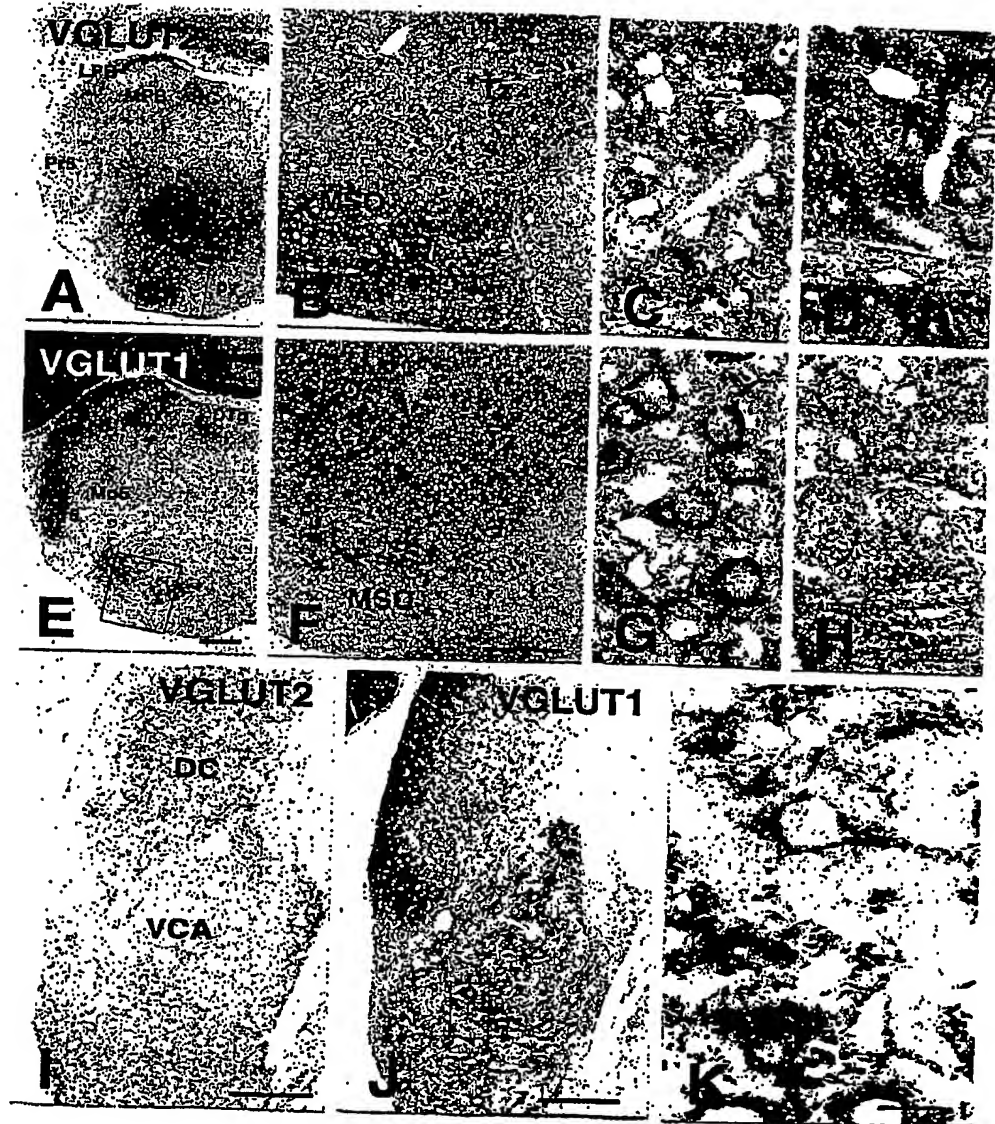


Figure 18

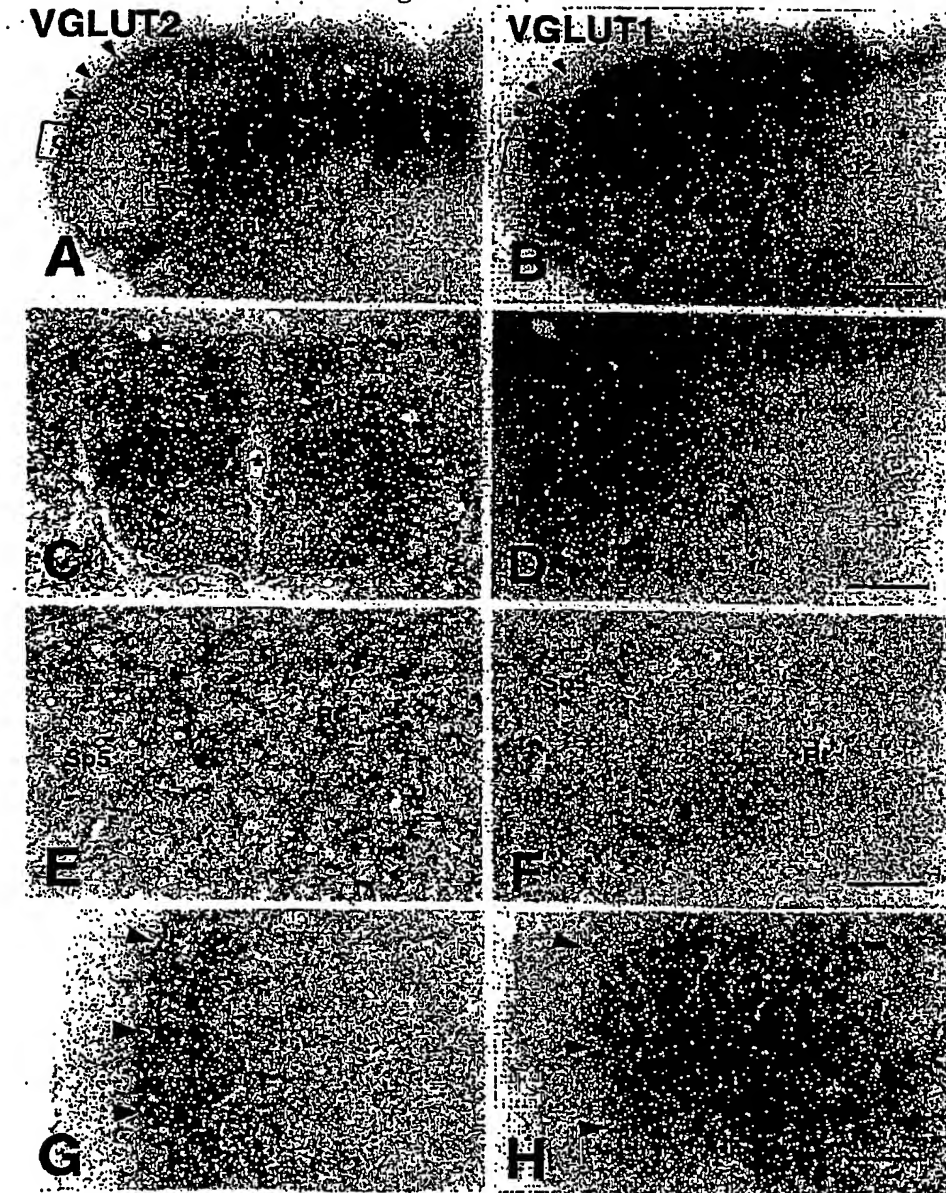


Figure 19

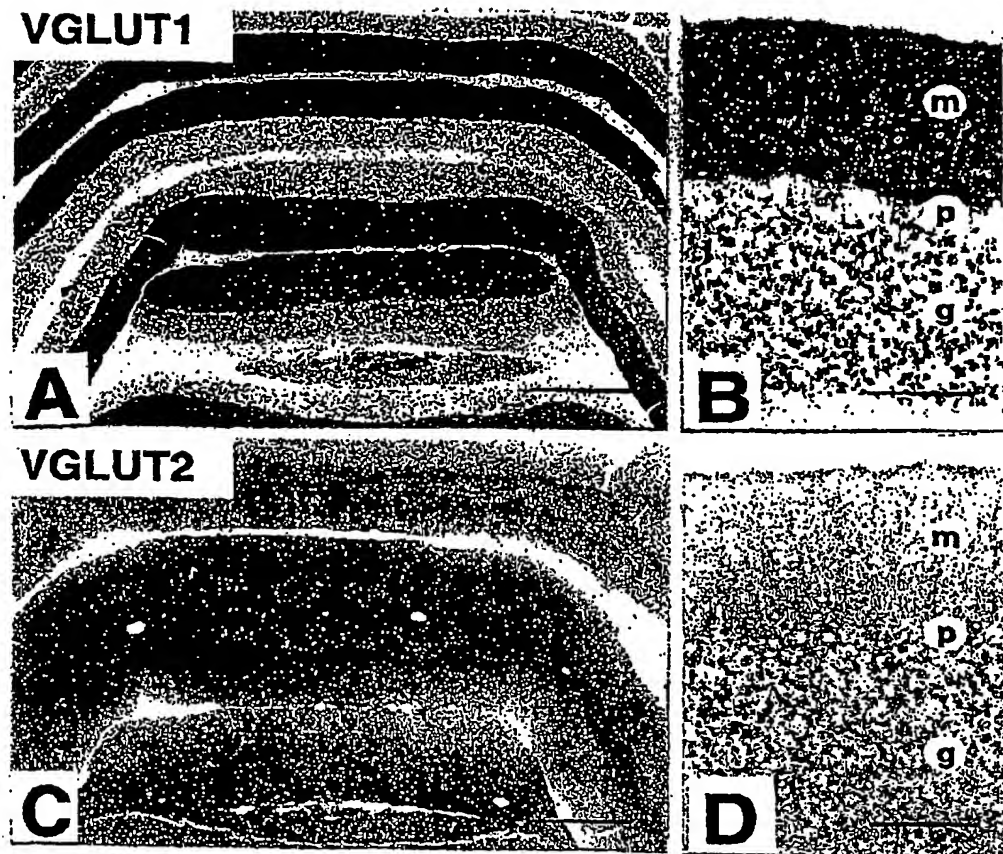


Figure 20

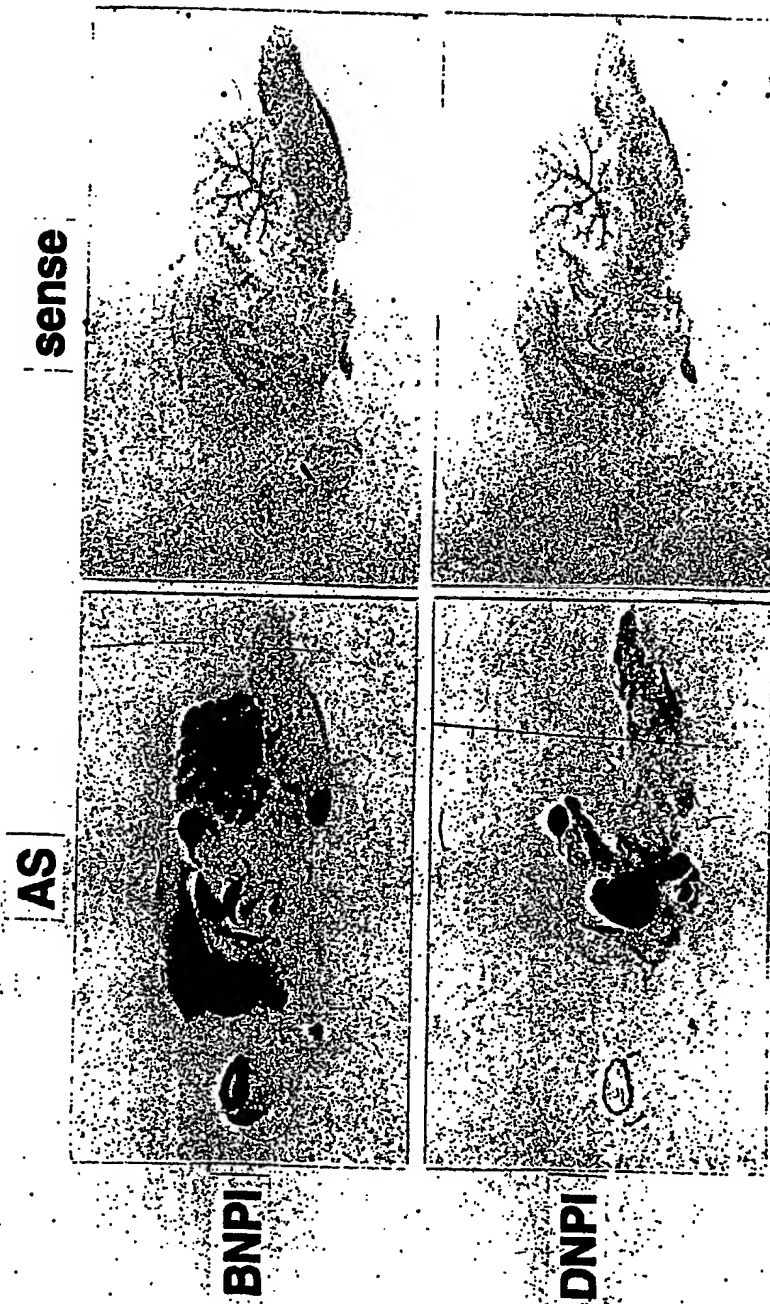


Figure 21

